

OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

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Attachment No. 3

INITIAL STATEMENT OF REASONS

CALIFORNIA CODE OF REGULATIONS

TITLE 8, Division 1, Chapter 4, Subchapter 5, Group 1, Low-Voltage Electrical Safety Orders.
Articles and Sections as follows:

Article	Section
2. Administration.	2305.2 Application.
4. Requirements for Electrical Installations.	2340.12 Mechanical Execution of Work
	2340.16 Work Space About Electric Equipment.
6. Branch Circuits.	2360.3 Ground-Fault Circuit Interrupter Protection for Personnel – General Industry.
13. Temporary Wiring.	2405.4 Ground-Fault Circuit Protection-Construction Site.
45. Cabinets, Boxes, and Fittings.	2473.1 Conductors Entering Boxes, Cabinets, or Fittings.
58. Capacitors.	2534.8 Disconnecting Means.

Low-Voltage Electrical Safety Orders - Addendum

SUMMARY

The Occupational Safety and Health Standards Board (Board), recently updated Title 8 Low-Voltage Electrical Safety Orders (LVESO) for equivalency with updates to 29 CFR Part 1910, Subpart S. That rulemaking action was pursuant to Labor Code Section 142.3, which mandates the Board to adopt standards at least as effective as federal standards addressing occupational safety and health issues. That rulemaking process followed the authority listed in Labor Code Section 142.3(a)(3), sometimes referred to as a “Horcher” rulemaking; thus it was limited only to changes covered by the counterpart federal standard. However, during the course of that rulemaking, other items, outside the scope of the “Horcher” process, were noted to be ambiguous, obsolete, overlapping, conflicting, and/or unnecessary. The purpose of this rulemaking proposal is to address those items.

SPECIFIC PURPOSE AND FACTUAL BASIS OF PROPOSED ACTION

Section 2305.2. Application.

Subsection (b), Extent of Application, specifies effective dates for different parts of the LVESO. Subsequent to the adoption of the LVESO update, Board staff became aware that the effective date for Section 2395.6, Portable and Vehicle-Mounted Generators, was unclear. Accordingly, Section 2305.2(b) is being amended to clearly indicate that, consistent with federal standards, amendments to Section 2395.6 became effective on May 5, 2008, the same time the general update became effective. The purpose and necessity for this amendment is to simplify compliance and enforcement by clearly establishing the effective date for changes made for portable and vehicle-mounted generators.

Section 2340.12. Mechanical Execution of Work.

Subsection 2340.12 requires that electric equipment be installed in a neat and workmanlike manner. Subsection (a) provides, in relevant part, that unused openings in boxes, raceways, auxiliary gutters, cabinets, equipment cases, or housings shall be effectively closed to afford protection substantially equivalent to the wall of the equipment.

Similar requirements are found in Section 2473.1(b), which is proposed for deletion as being duplicative and overlapping with other sections of the Safety Orders, including Section 2340.12(a). One subject of the proposed deletion of subsection 2473.1(b), however, that is not covered elsewhere is the matter of unused openings in fittings. It is therefore proposed to add “fittings” to 2340.12(a) in order to maintain that requirement in the Electrical Safety Orders. The purpose and necessity for these revisions is to assure that unused openings in fittings are effectively closed to protect employees from hazardous electrical exposures.

Section 2340.16. Work Space About Electric Equipment.

Subsection (b), Work Space, prescribes the work space to be provided for examination, adjustment, servicing, or maintenance of energized equipment. Subsection (b)(2)(A) specifies that concrete, brick or tile walls shall be considered as grounded when determining width for clear work space requirements. A stakeholder requested clarification to the effect that any concrete, brick or tile surface be considered as grounded when determining any clear work space requirement (i.e., depth, width, height). This would be equivalent to National Fire Protection Association (NFPA) 70E-2004, Table 400.15(A)(1), Condition #2, and 2005 National Electrical Code (NEC) Table 110.26(A)(1), Condition #2. Thus it is proposed to relocate “concrete, brick, or tile” from subsection (b)(2) to Table 2340.16, Condition #2, so that it will apply to all clearances, and not just to width. The purpose and necessity for this proposed relocation is to conform Section 2340.16 of the LVESO to industry standard NFPA 70E-2004, and the 2005 Edition of the NEC.

Section 2360.3. Ground-Fault Circuit Interrupter Protection for Personnel - General Industry.

Section 2360.3 prescribes when ground-fault circuit interrupter (GFCI) protection is required during maintenance, remodeling, or repair of buildings, structures, or equipment “or during similar *construction-like* activities” [italicized for emphasis]. Existing Section 2405.4, Ground-Fault Circuit Protection-Construction Site, which was outside the scope of the Horcher

rulemaking, contains similar, but not identical, grounding requirements for construction sites. The ambiguity of the term “construction-like” in Section 2360.3 causes it to overlap with Section 2405.4, and because of different grounding requirements for general industry versus construction, it creates confusion as to application. It is therefore proposed that the term “construction-like” be deleted from Section 2360.3(b). The purpose and necessity for this change is to clarify application of electrical standards for general industry and construction.

Section 2405.4. Ground-Fault Circuit Protection – Construction Site. Subsection (a) General.

An advisory opinion from Federal OSHA, Region 9, on the Low-Voltage Electrical Safety Orders update¹ noted that Subsection 2405.4(a) describes a construction site as “a place of employment where erection, demolition, *modification*, alteration or excavation is being performed on a building, structure or underground facility, other than mining (emphasis added).” Region 9 opines that inclusion of the term “modification” in this definition excludes GFCI protection from activities intended to be covered by general industry standards in 29 CFR 1910, Subpart S. Section 2405.4 is the state counterpart to federal 29 CFR 1926.404(b)(1) which contains ground fault protection requirements for construction. The ground fault protection requirements of 29 CFR 1926, Subpart K, do not require GFCI in all cases where they are required by 29 CFR 1910, Subpart S, because of difficulties in implementing GFCI in construction settings. Thus Region 9 was concerned that the provisions of Section 2405.4 might be applied in certain instances of remodeling and modification of existing buildings, and that these provisions would not be as effective as federal standards for general industry.

Board staff therefore proposes to delete the term “modification” from Section 2405.4(a). The purpose and necessity for this deletion is to clarify the distinction between grounding requirements for general industry (Section 2360.3) and construction (Section 2405.4).

Section 2405.4. Ground-Fault Circuit Protection – Construction Site. Subsection (b) Construction Sites, Exception.

This subsection requires that employees on construction sites be protected by either or both ground-fault circuit interrupters as specified in Subsection 2405.4(c) or by an assured equipment grounding conductor program as specified in Subsection 2405.4(d) or by both. An exception to this subsection exempts from these requirements individual cord sets, supplied from any receptacle on a 15- or 20- ampere branch circuit which is part of the permanent wiring of building or structure. This exception is not supported by 29 CFR 1926.404(b)(1) or the NEC, and is less protective than the counterpart federal standard. The exception is therefore proposed for deletion. The purpose and necessity for this deletion is to provide safety at least as effective as the counterpart federal standard and the NEC.

Section 2405.4. Ground-Fault Circuit Protection – Construction Site. Subsection (d) Assured Equipment Grounding Conductor Program.

This subsection requires the employer to establish and implement an assured equipment grounding conductor program on construction sites covering all 120-volt, AC, single-phase, cord sets, receptacles which are not a part of the permanent wiring of the building or structure and equipment connected by cord and plug, which are used by employees. Modifications are

¹ Letter to OSHSB from US Dept. of Labor, OSHA Region 9, dated July 14, 2008.

proposed to (1) delete “120-volt, AC, single-phase” and (2) amend “used by employees” to read “available for use or used by employees.” The purpose and necessity for these modifications is to provide protection equivalent to 29 CFR 1926.404(b)(1)(iii).

Section 2405.4. Ground-Fault Circuit Protection – Construction Site. Note to Subsection (d) Assured Equipment Grounding Conductor Program.

A note below subsection (d)(4) provides that double-insulated tools or other similar equipment need not be grounded, and cross references to Section 2395.45(d)(5). This cross-reference is incorrect, and it is proposed to be corrected to Section 2395.45, Exception 2 which requires double-insulated equipment to be distinctively marked. The purpose and necessity for this amendment is to clarify the use of double-insulated tools and utilization equipment.

Section 2473.1. Conductors Entering Boxes, Cabinets, or Fittings.

This section prescribes protection and securing for conductors entering cutout boxes, cabinets, or fittings. Subsection (b) provides that unused openings in cabinets, boxes, and fittings shall be effectively closed. Subsection (b) is duplicative of Sections 2340.12(a) and 2473.2(a); therefore it is proposed for deletion. The purpose and necessity for this deletion is to clarify requirements by eliminating overlapping and duplication.

Section 2534.8. Disconnecting Means.

This section prescribes disconnecting means for capacitors. As presently worded, it does not require the disconnecting means to open all ungrounded conductors simultaneously. This is contrary to NFPA 70-2005 (NEC) Section 460.8(C)(1), thus it is proposed to amend this section to be consistent with the NEC. It is also proposed to reformat the remainder of the section to be consistent with the verbiage of NEC 460.8(C). The purpose and necessity of these modifications will be to conform capacitor disconnecting means to those prescribed by the 2005 edition of the NEC.

DOCUMENTS RELIED UPON

NFPA 70, National Electrical Code (NEC), 2005 Edition, published by National Fire Protection Association, Inc. (NFPA), One Batterymarch Park, Boston, MA 02169; Table 110.26(A)(1), Condition #2 and Section 460.8(C).

NFPA 70E, Standard for Electrical Safety in the Workplace, 2004 Edition, published by National Fire Protection Association, Inc. (NFPA), One Batterymarch Park, Boston, MA 02169; Table 400.15(A)(1), Condition #2.

Federal Register, Vol. 72, No. 30, Wednesday, February 14, 2007, U.S. Department of Labor, OSHA, 29 CFR Part 1910, Electrical Standard (Final Rule), pages 7136-7221.

Letter to OSHSB from US Dept. of Labor, OSHA Region 9, dated July 14, 2008.

Facsimile to OSHSB from U.S. Dept. of Labor, OSHA Phoenix Resource Center, dated April 2, 2009.

These documents are available for review Monday through Friday from 8:00 a.m. to 4:30 p.m. at the Standards Board Office located at 2520 Venture Oaks Way, Suite 350, Sacramento, California.

REASONABLE ALTERNATIVES THAT WOULD LESSEN ADVERSE ECONOMIC
IMPACT ON SMALL BUSINESSES

No reasonable alternatives were identified by the Board and no reasonable alternatives identified by the Board or otherwise brought to its attention would lessen the impact on small businesses.

SPECIFIC TECHNOLOGY OR EQUIPMENT

This proposal will not mandate the use of specific technologies or equipment.

COST ESTIMATES OF PROPOSED ACTION

Costs or Savings to State Agencies

No costs or savings to state agencies will result as a consequence of the proposed action.

Impact on Housing Costs

The Board has made an initial determination that this proposal will not significantly affect housing costs.

Impact on Businesses

The Board has made a determination that this proposal will not result in a significant, statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states.

Cost Impact on Private Persons or Businesses

The Board is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

Costs or Savings in Federal Funding to the State

The proposal will not result in costs or savings in federal funding to the state.

Costs or Savings to Local Agencies or School Districts Required to be Reimbursed

No costs to local agencies or school districts are required to be reimbursed. See explanation under “Determination of Mandate.”

Other Nondiscretionary Costs or Savings Imposed on Local Agencies

This proposal does not impose nondiscretionary costs or savings on local agencies.

DETERMINATION OF MANDATE

The Occupational Safety and Health Standards Board has determined that the proposed standards do not impose a local mandate. Therefore, reimbursement by the state is not required pursuant to Part 7 (commencing with Section 17500) of Division 4 of the Government Code because the proposed amendments will not require local agencies or school districts to incur additional costs in complying with the proposal. Furthermore, these standards do not constitute a “new program or higher level of service of an existing program within the meaning of Section 6 of Article XIII B of the California Constitution.”

The California Supreme Court has established that a “program” within the meaning of Section 6 of Article XIII B of the California Constitution is one which carries out the governmental function of providing services to the public, or which, to implement a state policy, imposes unique requirements on local governments and does not apply generally to all residents and entities in the state. (County of Los Angeles v. State of California (1987) 43 Cal.3d 46.)

These proposed standards do not require local agencies to carry out the governmental function of providing services to the public. Rather, the standards require local agencies to take certain steps to ensure the safety and health of their own employees only. Moreover, these standards do not in any way require local agencies to administer the California Occupational Safety and Health program. (See City of Anaheim v. State of California (1987) 189 Cal.App.3d 1478.)

These proposed standards do not impose unique requirements on local governments. All state, local and private employers will be required to comply with the prescribed standards.

EFFECT ON SMALL BUSINESSES

The Board has determined that the proposed amendments may affect small businesses. However, no economic impact is anticipated.

ASSESSMENT

The adoption of the proposed amendments to these standards will neither create nor eliminate jobs in the State of California nor result in the elimination of existing businesses or create or expand businesses in the State of California.

ALTERNATIVES THAT WOULD AFFECT PRIVATE PERSONS

No reasonable alternatives have been identified by the Board or have otherwise been identified and brought to its attention that would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the proposed action.